(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



. | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

(43) International Publication Date 30 September 2004 (30.09.2004)

PCT

(10) International Publication Number WO 2004/084579 A1

(51) International Patent Classification7:

H04R 19/02

(21) International Application Number:

PCT/AU2004/000335

(22) International Filing Date: 18 March 2004 (18.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003901251

18 March 2003 (18.03.2003) AU

(71) Applicant (for all designated States except US): WINO-VATE PTY LTD [AU/AU]; 12 Weir Street, Glen Iris, VIC 3146 (AU).

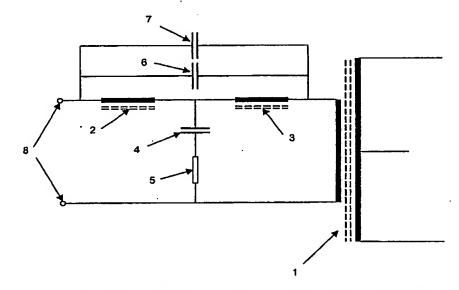
(72) Inventors; and

(75) Inventors/Applicants (for US only): VAN DONGEN, Charles, Cornelus [AU/AU]; 4 Chamouni Court, Frankston, VIC 3199 (AU). CHAMPION, Lindsay, Alfred [AU/AU]; 1 Grigg Avenue, Vermont, VIC 3133 (AU). HOWARD, Grover, Latham, 3rd [US/AU]; 807/14 Kavanagh Street, Southbank, VIC 3006 (AU). MACKIN-LAY, Robert, Neil [GB/AU]; 546 Brookton Highway, Roleystone, W.A. 6111 (AU).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TI, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: IMPROVEMENTS IN THE DESIGN OF ELECTROSTATIC LOUDSPEAKERS



(57) Abstract: A method of compensating for a reduction in output sound pressure level of an electrostatic loudspeaker, caused by front to back cancellation effects, using a resonant circuit and filter connected between the output of the audio power amplifier (8) and the input of the electrostatic loudspeaker transformer (1). The resonant circuit includes an inductor (3), capacitor (4) and resistor (5), the values of which are chosen so that the shape of the tuned circuit response curve closely matches the shape of that part of the loudspeaker response curve that requires compensation. The resonant circuit and filter may be combined with a metal oxide varistor or similar non-linear device to limit over-voltages.

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, F1, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, F1, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.